

Running head: REDUCING COMMUNITY RISK THROUGH ACCREDITATION

Accreditation: Does it Help Reduce Community Risk?

Travis L. Crabtree

Carrboro Fire-Rescue Department

Carrboro, North Carolina

### Abstract

This descriptive research paper examined varying methods of reducing the Town of Carrboro's community risk by considering several national standards and the Commission on Fire Accreditation International's (CFAI) Fire and Emergency Service Self-Assessment Manual (FESSAM), specifically Criterion 5H-Emergency and Disaster Management as performance measures. The Carrboro Fire-Rescue Department has hired many new employees recently and wanted to verify that the town was accomplishing all it could to ensure the safety of its residents. The research problem is the Town of Carrboro is looking to pursue accreditation but has not identified the advantages and disadvantages of whether accreditation can help reduce its community's risk. The purpose of this research paper was to identify areas of improvement for the Town of Carrboro's Emergency and Disaster Management Plan.

The author conducted research in an effort to answer the following questions:

1. What are the Carrboro Fire-Rescue Department's current community risk performance measures and standards?
2. What have other fire departments who are accredited learned from the questions found in Criterion 5H-Emergency and Disaster Management section?
3. What improvements from using Criterion 5H-Emergency and Disaster Management can be implemented to allow the Town of Carrboro and other accredited municipalities within North Carolina along with Orange County work better together during emergencies and disasters?
4. What are the performance measures that Carrboro Fire-Rescue Department needs to implement to meet the performance measures found in Criterion

5H-Emergency and Disaster Management section?

The current Emergency and Disaster Management Plan for the Town of Carrboro meets approximately 78% of the FESSAM Criterion 5H-Emergency and Disaster Management section. It is recommended that the town pursue the National Fire Protection Association (NFPA) 1600 *Recommended practice for disaster management* as the next step of progression to reduce its community's risk along with implementing the final questions in Criterion 5H.

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## Introduction

The Carrboro Fire-Rescue Department (CFRD) has been considering participating in the accreditation process for many years but due to financial constraints along with limited personnel this has been a venture not taken. Fire service accreditation is a non-prescriptive measurement of a community's ability to mitigate the risks that face it by completing an evaluation of the fire service agency through a self-assessment process. Once the description has been completed for 258 performance indicators, an analysis of how each is working must be performed along with a plan on how to improve those performance indicators that are not working. A group of peer reviewers then perform an onsite evaluation visit to affirm the agency's goals, objectives, and standards are actually being met. In addition, the CFRD has also been researching how it could better operate during major disasters like hurricanes and ice storms by being prepared and what efforts it might implement to reduce its community risk. The accreditation process involves a large self-assessment to evaluate current services against a set of industry standards to provide a pathway of continuous improvement enhancements of service to the community.

The research problem is the Town of Carrboro if accreditation can help reduce the community's risk. The purpose of this descriptive research is to identify areas of improvement for the Town of Carrboro's Emergency and Disaster Management Plan using the Commission on Fire Accreditation International's Fire and Emergency Service Self-Assessment Manual (FESSAM), specifically Criterion 5H-Emergency and Disaster Management as a performance measure.

1. What are the Carrboro Fire-Rescue Department's current community risk performance measures and standards?

2. What have other fire departments who are accredited learned from the questions found in Criterion 5H-Emergency and Disaster Management section?
3. What improvements from using Criterion 5H-Emergency and Disaster Management can be implemented to allow the Town of Carrboro and other municipalities within North Carolina along with Orange County work better together during emergencies and disasters?
4. What are the performance measures that Carrboro Fire-Rescue Department needs to implement to meet the performance measures found in Criterion 5H-Emergency and Disaster Management section?

#### Background and Significance

The Carrboro Fire-Rescue Department has a dedicated staff that strives to serve the citizens within the Town of Carrboro and the South Orange Fire District (SOFD). The employees of the CFRD follow the mission statement with a strong desire to serve. The current mission states “To protect lives, property, and the community from the destructive effects of fire, natural disasters, and hazards by providing public education, incident prevention, and emergency response services.” The total area of the Town of Carrboro and the SOFD is about 24 square miles with approximately 24,000 residents. The Town of Carrboro proper is about six square miles and over 19,000 of the residents actually live within the town limits, encompassing the majority of the calls for service to which the CFRD responds (Carrboro Fire-Rescue Department, 2009). The Town of Carrboro prides itself as being the most densely-populated town in North Carolina. Acting as a bedroom community for the University of North Carolina at Chapel Hill and UNC

Hospitals, many college students reside in apartments, creating a large transient population.

The Town of Carrboro, also known as the “Paris of the Piedmont,” lies near the intersection of Interstate Highway 85 and Interstate Highway 40 which is near the middle of the state of North Carolina (Martin, 1970). During most years, North Carolina is impacted by several tropical depressions, tropical storms, and hurricanes primarily because of the way the state protrudes into the Atlantic Ocean. These severe storms, consisting of high winds and heavy rains, create lots of flooding, downed trees, power outages, and structural damage. The total number of severe tropical storms that have impacted North Carolina since 1851 is 252 (State Climate Office of North Carolina, 2009). However, during years when the El Niño effect creates a pressure difference moving from the Pacific Ocean towards the Atlantic Ocean, the hurricane season seems to be dramatically calmed because the weather patterns tend to push the hurricanes to the east preventing them from making landfall. This El Niño pattern seems to occur every three to eight years (National Oceanic and Atmospheric Administration, 2009). Another condition effecting North Carolina is frozen precipitation. Carrboro’s average amount of precipitation is above the United States average by almost one inch during most of the calendar year (City Data, 2009). This, combined with an annual median temperature of 37 degrees Fahrenheit, creates a hazardous combination for ice accumulation (City Data, 2009). During the daytime hours, most snow and ice starts to melt and then it refreezes at night. This process creates black ice which is very difficult to see when driving. Many times the snow covers this ice making a severe driving hazard.

The CFRD is made up of thirty-seven employees consisting of twenty-one

firefighters, six fire driver-operators, three lieutenants, three captains, one fire marshal, one deputy chief, the fire chief, and one administrative support specialist. The department currently provides fire suppression, light rescue, and medical services. These services also include fire prevention activities, education seminars, cardiopulmonary resuscitation (CPR) classes, basic life support (no transport), structural fire suppression operations, vehicle extrication, emergency management, and hazardous materials response. The CFRD also prides itself on being a proactive department in support of residential sprinklers in one-and-two family dwellings. Over sixty residential sprinkler systems have been installed with the help of CFRD personnel in Habitat for Humanity homes. Many have been in the Orange County, North Carolina area but personnel have ventured as far away as Lynchburg, Virginia and Morehead City, North Carolina to install these systems. It seems very natural for the CFRD to assist with providing a life safety system in single family dwellings as part of the department's mission statement. In addition to the sprinkler system installation program, over half of the staff are state certified fire inspectors who perform state mandated fire inspections on all commercial properties within the town and the extra-territorial jurisdiction (ETJ) to ensure code compliance with respect to the inspection schedule found in the North Carolina Fire Prevention Code, 2009 Edition. Inspectors performed over 900 fire inspections and identified over 2,700 fire code violations in fiscal year 2008-2009 (Carrboro Fire-Rescue Department, 2009). Having most of these fire code violations corrected in a timely manner has reduced the frequency of fires, which in turn has reduced the total property loss within the Town of Carrboro (Carrboro Fire-Rescue Department, 2009). This is one of the benefits of community risk reduction (Federal



Emergency Management Agency, 2005).

The fire inspection process seems to work well but only targets the commercial buildings which comprise only 11 percent of the total structures protected by the CFRD. The CFRD administration has always looked for ways to better serve its citizens hoping that maybe the Commission on Fire Accreditation process might create such an avenue. In 2006, an effort began to look into the accreditation process to see what it consisted of and how to approach such a daunting task. Light-duty employees (those who have medical limitations for a limited time-frame) were utilized initially to answer the 1,300 plus questions in the self-assessment manual but with minimal progress.

A true effort is needed to evaluate the effective response efforts of the CFRD particularly in the area of emergency and disaster management. Along with having the responsibilities of fire suppression, light rescue, and first responder services, the CFRD also oversees the All-Hazards Plan along with Emergency Operations Plan for the Town.

Recently, the CFRD has added 18 new firefighting personnel to its roster. Many of these employees are new to the fire service and are young with an average age of 26. Many of these new employees have had little experience with a hurricane or an ice storm as an emergency responder in Carrboro. We have had a couple of years with mild winters and few hurricanes which is contrary to normal years. In addition, training employees for this type of an experience is a unique challenge because these types of storms are seasonal and are difficult to recreate. Carrboro is located in the southern portion of Orange County, North Carolina. Orange County Emergency Services (OCES) provides the 9-1-1 service for the entire county, which includes: police, fire, EMS, sheriff, and rescue dispatching services. The entire county just transferred to a new 800

Mhz radio system from an antiquated VHF and UHF system that had been in place for over 30 years (D. Jeffries, personal communication, August 26, 2009).

The Town of Carrboro and the CFRD both try hard to serve and protect their citizens. In addition to installing smoke alarms across town, efforts to promote safe walking and bicycling to schools are also performed through grants. Issuing bicycle helmets, fireworks safety classes, Risk Watch, and Remembering When fire safety education programs produced by the National Fire Protection Association, home inspections, and other educational endeavors are pursued in an effort to reduce the overall community risk. In addition, Dr. Jane Brice, Orange County Medical Director has recommended an injury and illness prevention program should be started as part of the Executive Development applied research paper.

The research problem is aimed at targeting two of the United States Fire Administration's (USFA, 2005) operational objectives. The first objective is to promote within communities a comprehensive, multi-hazard risk-reduction plan led by the fire service. The second operational objective addressed by implementing this risk reduction plan is to reduce the loss of life by responding appropriately in a timely manner to emerging issues. It seems that these are part of the basis of emergency management, being prepared so that a department can respond with the needed resources to handle a particular situation and knowing where those resources are coming from so they can be deployed in a timely manner to assist the public.

#### Literature Review

Protecting the public has been a constant within the fire service; fires suppression, traffic control for downed power lines, fire alarm activations, and car crashes are the

majority of the calls for service a fire department actually performs according to national statistics (Ahrens, 2009). In many areas of the country, it is now recognized that emergency medical service (EMS) is also a mainstay of the modern fire service, as departments have provided this service for the past 20 to 30 years (Ballam, 2009).

However, the disaster and emergency management approach is still somewhat of a new concept to the fire service in comparison to EMS, emergency management gained large momentum in 1979 after the Three Mile Island incident (Bullock et al, 2008).

Emergency management has been called many things over the decades. In the 1930s, it was referred to as the Flood Control Act of 1934 which allowed the U.S. Army Corps of Engineers to regulate building in areas prone to flooding (Bullock et al, 2008). The Cold War and several Flood Insurance Acts also impacted our modern day emergency management practices providing emphasis on an all-hazards approach. The late 1970s was a pivotal turning point in providing focus to what we know today as the Federal Emergency Management Agency (FEMA) (Bullock et al, 2008). This was a consolidation effort by President Jimmy Carter to organize many agencies and functions under one entity that was officially established under the Federal Register 44 19367 in 1979 (Bullock et al, 2008). During this time, the director of FEMA would be required to report directly to the president of the United States with regard to preparation and mitigation on all major civil and natural disaster emergencies so that a prompt recovery could begin.

FEMA is to work with federal, state, and local government agencies on disaster preparedness and mitigation programs under 42 U.S.C 5131, Section 201. These programs are designed to create plans to mitigate the damage by lessening the impact on

persons and property. They also are to provide early warning notification to the public and establish emergency operations for rescue operations. In addition to these items, FEMA must also help create training exercises so that preparation for disasters can be planned for, critiqued, evaluated, and reviewed on an annual basis (Federal Emergency Management Agency, 2008). The traditional phases of emergency management are prevention, preparedness, mitigation, response, and recovery (Bullock et al, 2008). Prevention is the key to avoiding a disaster wherever possible (Bullock et al, 2008). By making the public aware and instilling the efforts of the three Es concept (Education, Engineering, and Enforcement) major disasters and loss of life can be minimized (Federal Emergency Management Agency, 2005). Preparedness is the second phase. There are 15 core emergency function areas of preparedness consisting of the following: agriculture and natural resources, communications, emergency management, energy, external affairs, firefighting, long-term community recovery and mitigation, mass care, housing and human services, oil and hazardous materials response, public health and medical services, public safety and security, public works and engineering, resource support, transportation, and urban search and rescue. All of these functions must be coordinated so that they work together in a synergistic manner to ensure a timely deployment of services in the effort of efficiency (Bullock et al, 2008). Mitigation is the third phase of emergency management which is almost entirely based on risk assessment. Evaluations of local communities must be performed by the emergency management coordinators on a regular basis to track changes within the community and the impacts those changes might have upon the population at large. Many times this is done through the local planning department during a plans review process for new construction or through

zoning efforts. This phase deals with multiple departments working together in a collaborative effort attempting to grasp the future problem as a whole instead of little segments. Response is the fourth phase which deals with mobilization of resources to the affected area. These resources are deployed to deal with the immediate needs of the disaster-impacted area and to help start controlling the situation. This portion normally lasts only for a few days. However, depending on the level of destruction, number of victims and displaced residents, the extent of the damage to public utilities, and ease of access to and from the affected area to bring supplies, this phase could last for more than a month. Finally, the recovery phase is the last phase of the emergency management process. This is an effort at establishing a new and normal way of life for those who have been affected, because it will never be the same (Bullock et al, 2008). A few examples are many businesses are never rebuilt, homeowners relocate, streets are rerouted to avoid areas prone to flooding. This phase is a long-term effort of rebuilding utilities, roads, businesses, and many times a whole community.

In North Carolina, each of the 100 counties is charged by law with providing local level emergency management functions per North Carolina General Statute (NCGS) 166A-2. This includes all areas within the geographical limits of the county, including activities of the municipalities in the county (NCGS 166A-7). Property owners may also be charged an extra fee to cover these emergency management requirements (NCGS 160A-209). According to the NCGS 166A-4(4), emergency management is defined as the never-ending preparedness cycle of prevention, mitigation, warning, movement, shelter, emergency assistance, and recovery. This includes all aspects of preparations for, response to, and recovery from war and peacetime disasters (NCGS 166A-5). All

disasters begin and end at the local level (Vogt et al, 2008). The governing body of the county has primary responsibility within the county to coordinate with state and federal agencies. Any and all municipalities must coordinate with the county per NCGS 166A-7(b). Within the past year, Orange County started the WebEOC program to allow all municipalities and the county to talk to each other through a real time interactive resource management tool on the internet. This is communicated directly to the North Carolina Department of Emergency Management. When a community or county becomes overwhelmed, it has the authority to enact intergovernmental cooperation and to utilize interlocal agreements per Article 20, Chapter 160A and mutual aid agreements under NCGS 166A-10(b).

With the myriad services that the fire service currently provides, it becomes difficult to specialize without identifying the challenges (Commission on Fire Accreditation International, 2005). While the volume of fires may be declining in some areas, the fire service still must be prepared for what may happen. According to Green and Rainwater, “when a catastrophic natural disaster happens, responders must be ready to enter a world of chaos and urgency” (2009). All fire departments must be prepared to the best of their ability to handle their community’s risk. Each governmental entity must determine the acceptable level of risk for which they are willing to prepare (Federal Emergency Management Agency, 2005). This starts with an effective community risk-reduction program. Through local ordinances, code enforcement, education, plans review, and other mitigation-type activities, a quality risk-reduction program can be implemented that meets each specific community’s needs (Federal Emergency Management Agency, 2005). The risk is very dynamic in each community because it is

based on socioeconomic issues (Federal Emergency Management Agency, 1997). The integrity of a given neighborhood can be an indicator of the quality of the houses and its residents according to some socioeconomic factors. This concept can predict fire rates at the neighborhood level due to structural conditions and maintenance performed on the housing in certain areas. These same structures can also be compromised during a disaster (Federal Emergency Management Agency, 1997). By implementing a comprehensive multi-hazard community risk reduction plan, many disasters can be minimized or prevented through early planning (Federal Emergency Management Agency, 2005). To meet the expectations of the residents, elected officials, and other citizens that patronize our community, a self-assessment of the core services provided by the CFRD must be conducted. This evaluation can be performed using national standards such as those produced by the National Fire Protection Association (NFPA), Commission on Fire Accreditation International (CFAI), and programs that work well for other fire service agencies. By taking the current mission statement of the CFRD and applying it with vision, the future goals and objectives can be met more effectively and efficiently. These goals and objectives are identified in the purpose statement of the Town of Carrboro Emergency Operations Plan (Town of Carrboro, 2009).

The self-assessment process proposed by the CFAI is a cumbersome and laborious one to say the least according to those departments who have proceeded with this daunting task (Mullen, 1995). However, the benefits of steadily and progressively working one's way through the self-assessment process could outweigh the amount of time investment even if accreditation is not pursued. The NFPA standards are always available for implementation as a choice since they are not mandated unless adopted at

the local level. One standard that continues to be at the top of the list according to the fire agencies that have received accreditation status is NFPA 1710 *Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments*. This standard can be used as a performance measure by most career departments across the United States and abroad. This is only one of many standards utilized by the fire service in an attempt to gauge how they are performing against other departments. The efforts of providing quality customer service at a reasonable price can be a challenging task, if the needs of the jurisdiction have not been properly identified (Commission on Fire Accreditation International, 2005). NFPA 1710 provides these minimum standards for deployment of resources, functions and objectives, incident management, turn out times, on-scene times, number of personnel on-scene based on the type of call, and effectiveness and efficiency of career fire departments.

The CFRD also utilizes and participates in the UNC-Chapel Hill School of Government's Benchmarking Study as another way of measuring efficiency and effectiveness. This document is produced annually by taking statistics from 16 municipalities in North Carolina, creating an average of specific goals for service delivery and comparing them with the previous years records if those towns have participated in the past (Roenigk, 2009).

Many fire service organizations are now turning toward a tool called accreditation, according to Rick Black, Program Manager at the Center for Public Safety Excellence. Accreditation is a non-prescriptive method of measuring a community's ability to mitigate risks that are common to its area or region. By looking forward and



organizing plans and tasks around a common concept, goal-orientation, equipment, and training can be structured to accomplish accreditation, which raises the bar of professionalism for the fire service, ultimately improving services delivered (Bruegman and Coleman, 1997). According to Fire Chief Peter Bryan of the Rancho Cucamonga Fire Protection District in California, the self-assessment manual is a great tool to use as a starting point to analyze data and to work from as a baseline while moving toward accreditation (Bryan and Pane, 2008). Another tool that compliments the accreditation process is the standards of cover document that assist fire departments in creating written procedures that help determine the distribution and concentration of fixed and mobile resources of an organization. For many departments this may be an easy task if there is only one or two stations, but for departments who have several stations up to thirty or forty stations this can be a challenging task that must be approached in a rational and systematic way (Commission on Fire Accreditation International, 2008). These standards of cover are set to ensure that the services provided by the fire department are in check with the goals and responsibilities of the organization. The standards of cover also allow an organization to review how well it is performing and make adjustments as necessary to improve in areas where there might be deficiencies. The entire process of accreditation, including standards of cover, helps those participating to continually improve the performance and quality of service provided to meet the needs of the citizens they protect. This improvement is not guaranteed to the organizations participating in accreditation; lots of hard work, personnel hours, and consistency are needed to continually achieve this level (Marsh, 1996).

Emergency preparation is what the fire service specializes in as the most important function it can provide (Bennett & Forsman, 2003). With proper planning, training, and anticipation by performing risk assessment, fire departments can help citizens deal with emergencies and disasters that occur from carelessness or by nature. If a community lies in an area that is prone to common disaster occurrences, more specific efforts of planning, training, and preparing must be performed (Carter et al, 2007). NFPA 1600 *Recommended practice for disaster management* is another tool that many fire departments and emergency management service providers utilize for minimum criteria for effective disaster mitigation, preparedness, response, and recovery efforts (National Fire Protection Association, 2007). This recommended practice, sometimes referred to as the National Preparedness Standard, also provides guidance for business continuity programs in addition to disaster and emergency management criteria (International Fire Service Training Association, 2007).

There are many different tools and programs available for fire departments and emergency management agencies to use in an effort to protect the public. Some of these are: Risk, Hazard, and Valuation Evaluation (RHAVE), FEMA's Methodology for Estimating Potential Losses from Disasters (HAZUS-MH, National Emergency Management Association (NEMA), Emergency Management Performance Grant Program (EMPG), Capability Assessment Readiness Program (CAR), National Emergency Management Baseline Capacity Assessment Program (NEMB-CAP), Emergency Management Accreditation Program (EMAP), Integrated Emergency Management Course (IEMC), Homeland Security Preparedness Technical Assistance Program, Homeland Security Exercise and Evaluation Program, National Exercise

Program; Models, Simulations, and Games Program, Business Continuity Planning (BCP), Vision, and Special Needs Awareness Program (SNAP). While this is not a comprehensive list, it does show that there are lots of options for emergency management personnel to utilize in efforts of protecting the public. Some of these tools and programs also help to accomplish necessary objectives related to standards of cover, creating policies or operating procedures, types of equipment to purchase, Insurance Services Office (ISO) grading schedule, and accreditation competencies.

An example of this is how utilization of the information gathered for the RHAVE software can complete or assist in completing several core competencies within the accreditation process. According to Rickey Davis of the City of Hickory Fire Department in North Carolina, 36 of the 108 core competencies can be achieved completely or almost completed simultaneously by merging information from RHAVE and the accreditation self-assessment manual (Davis, 2005). Davis also stated that the benefits of performing the self-assessment portion was an invaluable tool to the day-to-day operations of the fire department and emergency planning, even if a department chose not to pursue accreditation. By learning of the many tools and programs that are available along with the impact that those tools and programs might have in assisting fire service organizations in synergistically completing multiple projects simultaneously, the author thought it would be interesting to learn from the accredited fire departments in North Carolina what tools and programs they used during their accreditation process and how it helped them primarily using the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management (Commission on Fire Accreditation

International, 2000). There are no core competencies within Criterion 5H-Emergency and Disaster Management.

### Procedures

The research began at the Learning Research Center located on the campus of the National Emergency Training Center (NETC). Published material was reviewed as it related to fire service accreditation, emergency management, disaster planning, risk management, and performance measurement. The scholar research option was also utilized while at the NETC via the Google website.

The first research question focused on the current performance measures and standards that the CFRD utilizes with regard to community risk. The Town of Carrboro Emergency Operations Plan was implemented 13 years ago, according to Captain Walter Mills, who was instrumental in writing the document for the first time just before Hurricane Fran ravaged North Carolina. To ensure that the plan was keeping up with current procedures, the author had Captain Mills perform a self-assessment of the CFRD by answering all 55 questions related to the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management. The Director of Orange County (NC) Emergency Services, Frank Montes de Oca was asked to answer all of the questions with respect to the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management in an effort to obtain an objective view from the county, which holds the primary responsibility for emergency management. Furthermore, the author answered all of the questions related to the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management to ensure consistency, accuracy, and to make sure that we were all on the

same page with regard to our efforts in providing programs while protecting the community we all serve. This seemed like a logical way to start, since all disasters begin and end at the local level, and all local governments will start the process and ask for assistance as needed (Vogt et al, 2008). Each county has the primary responsibility to coordinate with state and federal agencies when imminent threat of a disaster exists. Out of the 55 questions posed, answers were consistent on 20 (36%) of the questions. Some discrepancies appeared to be a result of municipal responsibilities as compared to county responsibilities and how they are viewed. Twenty-three (42%) questions had varying answers but were proven to actually be consistent once the correct reply was determined by researching past history and verifying the response with the person answering the question.

The second research question inquired what other accredited fire departments had learned from the accreditation process, in particular Criterion 5H- Emergency and Disaster Management. Another procedure conducted was to survey the limited accredited fire departments within the state of North Carolina. A ten question survey was sent directly to the accreditation manager for each accredited fire department. The total list of eight departments was provided by Program Manager Rick Black who works for the Center for Public Safety Excellence. These eight departments were picked specifically because of their experience in working with the accreditation process and the common thread of similar disasters within the state. These departments were Asheville, Cary, Charlotte, Gastonia, Greensboro, Jacksonville, Rocky Mount, and Wilson. Departments who were only applicant agency or registered agency status with the Center for Public Safety Excellence were not surveyed due to the fact that they had not

completed the self-assessment process. Assuming this, the author believed that those departments had little to no experience in working with the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management.

The survey was intended to be a very specific instrument revolving around the concept of using accreditation to help reduce community risk. Of the eight departments, only five returned the survey and one of those five only answered the first of ten questions, leaving the other nine questions unanswered by skipping them. The third and fourth research questions also utilized the survey sent to all accredited fire departments in North Carolina to provide a list of improvements that could be implemented along with performance measures they now use through lessons learned by those departments who have already traversed the accreditation trail.

### **Definitions**

Accreditation – An evaluation and recognition process to ensure the maintenance of standards or qualifications for an organization (Commission on Fire Accreditation International, 2000).

Accredited Agency – An emergency-services agency that has completed the self-assessment process, a review of the results, and a peer review and has been found to be compliant with the CFAI accreditation model (Commission on Fire Accreditation International, 2000).

Applicant Agency – An emergency-service agency that has begun the self-assessment process but not completed it or submitted the results (Commission on Fire Accreditation International, 2000).

Commission on Fire Accreditation International (CFAI) – A non-profit organization established to evaluate fire-emergency service providers utilizing an established criterion,

self-assessment, and peer assessment leading to the award of an accredited status, also known as CFAI, and the fire and emergency service self-assessment (Commission on Fire Accreditation International, 2000).

**Core Competencies** – Those activities that the CFAI has agreed upon as being appropriate in achieving the goals and objectives of a credible organization and that are quantifiable within a reasonable amount of time (Commission on Fire Accreditation International, 2000).

**Disaster** – An occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property, resulting from any natural or man-made accidental, military or paramilitary cause (General Assembly of North Carolina, 2008).

**Emergency Management** – The never ending preparedness cycle of prevention, mitigation, warning, movement, shelter, emergency assistance, and recovery (General Assembly of North Carolina, 2008).

**National Fire Protection Association (NFPA)** – A non-profit, voluntary membership organization that develops standards for fire fighting procedures, fire prevention, and methods of fire protection (National Fire Protection Association, 2007).

**Peer Assessment** – The process whereby an outside group of CFAI fire-service evaluators review the performance of an accreditation candidate agency and determine how that agency compares to the self-assessment model (Commission on Fire Accreditation International, 2000).

**Registered Agency** – An emergency-service agency that has paid the registration fee with CFAI and receives the newsletters; however, these agencies have not officially started the self-assessment process (Commission on Fire Accreditation International, 2000).

Self-Assessment – The process in which an emergency services agency reviews its own efforts and determines the level of compliance with the standardized model developed by the CFAI. Once the self-assessment is performed and the results are completed, the agency can be reviewed and a determination made as to the merits of the agency for accreditation status (Commission on Fire Accreditation International, 2000).

Standards of Cover – A plan formulated by the local fire agency evaluating community risks, the methods of emergency service delivery (staff and equipment) the response history of the department, and the service-delivery steps. This written plan takes into consideration the geographical distribution of fire stations, the concentration of apparatus and equipment, and the frequency fire companies need or help other fire companies (Commission on Fire Accreditation International, 2008).

### **Limitations**

Several factors limited the efforts of the research for this applied research project. The first is the small number of departments within North Carolina that have achieved accreditation. There are only 17 additional departments within the state that are registered agencies that may have provided more incite on this project.

Another limiting factor is the small number of responses received from the survey. The author made numerous attempts to obtain more answers from the survey by reopening the survey deadline and personally contacting the accreditation managers with limited success. One additional department completed the ten question survey after these attempts were made, making the total of five respondents.

The last limiting factor is the assumption that the surveys were filled out as completely as possible. Having received one of the five surveys with only one answer



filled out leaves certain doubt on the time spent upon the ten questions within the survey by some of the respondents.

### Results

The goal of this research project was to determine if improvements could be made within the Town of Carrboro's Emergency and Disaster Management Plan by using the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management as a means to reduce its community risk. In addition, operational readiness initiatives, advantages and disadvantages of pursuing accreditation, and reviewing standards that other departments use could be utilized as tools to measure performance.

The research showed that the Town of Carrboro's Emergency and Disaster Management Plan was very close to other local plans with respect to state standards. The research also verified that the plan was meeting most requirements established by the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management section. Some of the key areas were:

1. The CFRD was actively involved with creating the disaster plan.
2. The disaster plan included Orange County.
3. The roles and responsibilities were clearly defined for each department.
4. The National Incident Management System (NIMS) was a key part of the disaster plan and is used routinely on most emergency calls for service.
5. Training evolutions, disaster drills, and computer based training with WebEOC software have all been performed within the past two years.
6. An overall hazard analysis was performed and has been updated.
7. A planning process was implemented to foster cooperation.

8. Emergency operations center (EOC) provisions have been established.
9. Call-back procedures have been in place and were updated as staffing increased to handle an emergency management response.
10. Mutual aid and automatic aid agreements have been updated within Orange County to include three department dispatching for high hazard occupancies and the North Carolina Emergency Management Mutual Aid and Assistance Agreement has been revised.
11. The organization is prepared for emergency management operations with regard to an all hazards approach.
12. The organization has identified its human resources for emergency management.

This was partially used to answer research question one which asked what were the performance measures and standards the CFRD currently used. The information was provided by having the three major players who are responsible for emergency management within the area answer all 55 questions within the Commission on Fire Accreditation International's Criterion 5H-Emergency and Disaster Management section. These members were captain Walter Mills of the CFRD, fire chief Travis Crabtree of the CFRD, and Orange County Emergency Services Director Frank Montes de Oca, Jr. Consistencies were of value to validate that these stakeholders were all on the same page. Out of the 55 questions in Criterion 5H, these three members answered 20 (36%) of the questions exactly the same. Furthermore, out of the 55 questions in Criterion 5H, the three members answered 23 (42%) of the questions in a very similar manner for a total of 43 (78%). The similarities in these answers differed slightly due to the municipal

obligations as compared to the county obligations with respect to the way the general statutes read.

The final 12 questions show weaknesses within the CFRD. The answers between the respondents differ and show a need for better organizing, resource identification, training, and sharing. These areas include the following:

1. A CFRD capability assessment should be performed
2. The hazard identification method should be utilized when performing a risk analysis.
3. The disaster plan should be evaluated for its quality and completeness.
4. The CFRD should be evaluated to determine if it is adequate in its operation and structure.
5. Perform an overall hazard analysis study of its jurisdiction.
6. Incorporate private resources into its disaster plan.
7. Identify all resources with regards to emergency management.
8. Interview all staff to determine if they are knowledgeable in their emergency operation duties.
9. Perform more disaster drills for training.
10. Determine the knowledge of staff with regard to emergency operation duties.
11. Incorporate staff training sessions within annual training calendar.
12. Incorporate citizen training sessions within annual training calendar.

Orange County Emergency Services states that all of the items listed above have been completed except for performing an overall hazard analysis study of the jurisdiction. However, the CFRD personnel have not had access to the resources and information, nor

have they participated in the training and drills that Orange County states they have been involved.

Another performance standard used was NFPA 1710 *Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career departments*. A similar approach to evaluating the CFRD was used by comparing the current operations to NFPA 1710. It was found that 59 (58%) of the 102 objectives are currently being met if NFPA 1710 was officially adopted by the Town of Carrboro. In addition, another 20 (20%) objectives were considered mostly in compliance with NFPA 1710, so they were flagged as being partially met. Seventeen (17%) of the 102 objectives were not being met at all. Many of these were special operations objectives, which the CFRD does not perform. This service is contracted out via an Orange County franchise agreement authorized by the Orange County Board of County Commissioners to the South Orange Rescue Squad (SORS). The remaining six (5%) objectives are handled entirely by Orange County Emergency Services – Emergency Medical Service (EMS) division.

A survey (Appendix A) was sent to the eight accredited fire departments (Appendix C) within the state of North Carolina to determine what performance measures and standards they utilize. Five of the eight fire departments responded to the survey and one of those five departments only answered the first question within the survey. All five of the accredited fire departments that responded utilized NFPA 1710 as one of their primary standards for a measure of performance. In addition, three of the five departments also used NFPA 1600 *Recommended practice for disaster management* along with Business Continuity Planning (BCP). One department used RHAVE, Special

Needs Awareness Program (SNAP), Homeland Security Preparedness Technical Assistance Program, Models, Simulation and Games; and the Homeland Security Exercise and Evaluation Program to better prepare their department.

Within the four departments who actually completed the survey, the ratio was split down the middle with respect to lessons learned from the accreditation project in the area of Criterion 5H-Emergency and Disaster Management. Fifty percent stated that they did learn areas of improvement and some work was needed to meet minimum performance standards. The other fifty percent stated that their performance standards were up to date and right on track with respect to the accreditation requirements. This research was utilized to help answer research question number two.

Question number three of the survey, interestingly enough, was targeted to help answer research question number three. Seventy-five percent of the departments (3) that completed the survey stated that the biggest improvement from the Criterion 5H-Emergency and Disaster Management section was that lines of communication were opened with many local agencies. Two of the departments stated that they created or updated a better resource list along with more current standard operating procedures. They stated that resource lists were compiled to accomplish critical tasks based upon typical scenarios. They also examined capabilities of their departments based upon concentration and distribution of fixed and mobile resources. These departments also stated that their resource management practices changed after working through the accreditation process and all four of the fire departments stated that they updated their Emergency and All-Hazards Plan to ensure continuity of operations. However, three of

the four accredited fire departments surveyed are not part of the Emergency Management Accreditation Program (EMAP).

All of the fire departments who completed the survey are actively involved with using an early warning communications system like CodRed, Connect CTY, Dialogics or other similar systems. These systems primarily use the telephone network to contact residents during an emergent situation. All departments surveyed also utilized and participated in their Local Emergency Planning Committee (LEPC).

Of the fire departments surveyed, a concentration of hazardous materials and terrorism exercises were implemented with respect to the accreditation process and Emergency and Disaster Management. In addition, these same departments also performed exercises on mass casualty, severe weather, aircraft crashes using table top, functional, and full scale training scenarios.

The final survey question revolved around whether or not the accreditation process ultimately helped with reducing a community's risk. This survey question was directed at research question number two. Seventy-five percent stated that the accreditation process did help with reducing their community's risk by providing an accurate and current description of potential hazards located within their jurisdictions along with an analysis of their current performance and recommendations for policy statements. Specific standards of coverage were developed for typical risks to meet the established acceptable level of risk that each community is willing to accept. Citizens, city management, elected officials, and emergency services must all work together to determine what the acceptable level of service they desire compared to the acceptable

level of risk they may be subjected to and then compare that to how much they can actually afford.

### Discussion

The research showed that pursuing accreditation, particularly in the area of Disaster and Emergency Management, appears to be a valid effort. A more comprehensive approach is certainly needed with more active participants to determine what an actual cost benefit ratio might be by performing a more thorough analysis. Many of the accredited departments surveyed stated that open lines of communication were established while working on their accreditation project. This in itself is a great concept. If departments within an organization are talking, then the reward is already occurring by making a synergistic propulsion of effort towards the common goal. Taxpayers deserve the best service and many employees only work within their silo or their small part of the overall concept of government, being their department or division within the department or local government.

Prior to the development of the Commission on Fire Accreditation International's accreditation process, fire departments and emergency management agencies managed to protect the majority of the public at large. Today there are only 134 accredited fire service agencies according to Rick Black, Program Manager at the Center for Public Safety Excellence. However, there are some 30,000 fire departments nationally. With this in mind, the majority of the public is protected by departments who are not accredited and it seems as if the public finds this level of risk acceptable. Most communities must be comfortable with the service that is currently being provided; if they were not, these communities would probably request volumes of additional

resources. Some would argue that full-time employees would be needed for better response times, others might state that more fire stations are needed, or an accreditation manager might be required before buying the next new fire engine.

The CFRD's current community risk performance measures and standards meet a large majority of the accreditation objectives which total 43 (78%) of the 55 performance objectives. Ironically enough, 79 (78%) of the 102 performance objectives found in NFPA 1710 are also being met completely or very closely as current operations stand. The CFRD operations do need several enhancements to both the self-assessment accreditation performance objectives and to NFPA 1710. The overall goal would be to maximize compliance to the best of the abilities of the department. However, a lot of work will be needed to meet the requirements of NFPA 1600. Only 14 (17%) of the objectives found in NFPA 1600 were being completely achieved. An additional 50 (61%) objectives were being addressed but only in a very minimal capacity. To maximize compliance in these 50 objectives, a lot of work by town staff, the CFRD staff, and the business community will be required as most of this work revolves around local business and their ability to recover from major incidents.

While accreditation is highly recommended by almost every department who has achieved the highest level of recognition currently available, those same departments would also say it is time consuming and an expensive process to pursue. The author believes that there are many departments that would perform well in the accreditation process. However, either due to the political environment, financial constraints, lack of personnel to dedicate to such a daunting task, or most likely a combination of all of the



above, good departments cannot commit themselves or are not allowed to commit themselves to the accreditation process.

For departments and new leaders, using the accreditation self-assessment manual would be a great tool to use along with several NFPA standards to update existing guidelines for their department or to create new guidelines if they do not exist. Modeling all new documents around the accreditation criteria would be a worthwhile investment of time since the research has to be conducted anyway. Why not complete several tasks simultaneously and meet accreditation criteria along with NFPA recommendations when working on standardizing your department?

Ultimately, it comes down to serving the citizens and most communities are probably satisfied with the service they are provided. Most citizens take the fire department for granted because they never have to use the fire service agency until an emergency is occurring. Citizens lose track of time during an emergency just as the firefighters and the incident commander on the scene of a working fire. Any help whether it is good or bad service is appreciated because the fire service agency provides a specialized service that the majority of the public doesn't understand and most departments do not educate the public on this topic. Whether it is a volunteer, a combination, or a career department, an acceptable level of service should be provided to match the acceptable level of risk of that particular community (Federal Emergency Management Agency, 2005).

### Recommendations

The purpose of this research was to identify ways in which pursuing accreditation could actually help reduce the Town of Carrboro's community risk. After reviewing the questionnaires, surveys, the self-assessment accreditation process, and several NFPA

standards, the first impression reveals that the CFRD and the Town of Carrboro is in decent shape with regards to the requirements found in FESSAM Criterion 5H-Emergency and Disaster Management. In comparing and analyzing the answers, it is of a consistent nature that the current All-Hazards Plan is meeting more than three-fourths of the requirements. Clearly there is room for improvement but the overall outcome of the research shows that the majority of the objectives are being met.

It has been determined by performing this research that the efforts of the original Town of Carrboro All-Hazards Plan, upon its creation, along with annual updating successfully obtained most of the accreditation objectives. However, the Town of Carrboro wants to make its All-Hazards Plan as solid as possible. One way of performing the task of solidification is by implementing more of the 12 questions not yet incorporated within its current All-Hazards Plan but is spelled out within the self-assessment process. Some of these 12 questions are under the control of Orange County, which presents the need for more communication between agencies in order to achieve them. This was identified as a key component of accreditation as identified in the third survey question that was sent to the North Carolina accredited departments. These areas include the following:

1. A CFRD capability assessment should be performed.
2. The hazard identification method should be utilized when performing a risk analysis.
3. The disaster plan should be evaluated for its quality and completeness.
4. The CFRD should be evaluated to determine if it is adequate in its operation and structure.

5. Perform an overall hazard analysis study of its jurisdiction including Orange County.
6. Incorporate private resources into the Town of Carrboro disaster plan.
7. Identify all resources with regard to emergency management. Orange County has a master list of resources that should assist in streamlining this effort.
8. Interview all staff to determine if they are knowledgeable in their emergency operation duties.
9. Perform more disaster drills for training. Since Orange County has overall responsibility for emergency management, it seems prudent to actively involve them.
10. Determine the knowledge of staff with regard to emergency operation duties.
11. Incorporate staff training sessions within annual training calendar.
12. Incorporate citizen training sessions within annual training calendar.

By addressing these 12 questions, the author feels that the current All-Hazards Plan will be a better plan by targeting the weaknesses identified through the research conducted. In addition, NFPA 1600 must be included to a greater extent. The efforts of assisting the taxpayers by implementing a Business Continuity Plan will help everyone in the local community. Since the CFRD is only meeting a very small portion of this NFPA standard completely (17%), placing more emphasis on compliance of this standard along with a concerted effort targeting recovery may provide a bigger impact by educating the business owners on what the focus of the fire service is all about. Finally, meeting NFPA 1710 in its entirety is not feasible for the CFRD, since 22% of the questions are handled by external agencies outside of the control of the CFRD staff. However, training

exercises and updated mutual aid contracts are some areas where better working relations can be achieved.

By performing the research necessary to write this applied research project, the author has made many new contacts at the local level and across the state. A new group has recently been formed called the North Carolina Accreditation Manager's Consortium in which the CFRD is taking part by actively attending these meetings. This group currently consists of 55 members from 23 municipalities, two counties, and one Department of Defense agency. Items being discussed at these meetings include but are not limited to: strategic plan development, standards of cover overview, multi-risk hazard analysis through the use of RENCI, growth planning matrix for resource deployment, using building codes for identification and classification of risk hazards, and preparation of documents for accreditation submittal. The ultimate goal of attending these meetings is to lessen the steep learning curve of the accreditation process by learning from those who have already ventured down this road of completing such a comprehensive task. The CFAI created a Microsoft Windows SharePoint Site on December 1, 2009 dedicated to the North Carolina Accreditation Manager's Consortium to assist in collaborating. North Carolina is only the second state to have such a medium available.

### **Additional Research**

The Commission on Fire Accreditation International has now released the 8<sup>th</sup> edition of FESSAM which incorporates an additional 15 questions pertaining to domestic preparedness and terrorist attacks which will need to be addressed in the All-Hazards Plan as it is being updated. Criterion 5H – Emergency and Disaster Management is just a small part of the overall accreditation process which must be reviewed to capture the entire package. A thorough review of the entire document must be conducted in order to

make the CFRD a better-prepared organization when it comes to reducing its community risk.

While the pursuance of accreditation has the ability to help reduce community risk, it is not the only tool that should be utilized. There are numerous standards and documents available that can be implemented to help recognize hazards and develop strategies to address these hazards with respect to current resources.

RHAVE is no longer a viable option because it is no longer available. A new software called Vision will soon be available from a joint effort involving the Center for Public Safety Excellence, the International Association of Fire Chiefs, the International Association of Fire Fighters, the National Institute of Standards and Technology, and Worcester Polytechnic University. This is a similar tool to RHAVE but it has been enhanced by a company called Emergency Reporting through a major grant from the U.S. Department of Homeland Security Assistance to Firefighters Grant Program. Beta testing for this software is currently underway and it should be revised to incorporate all of the recommendations from the beta sites. Once this software is available, the CFRD plans to obtain a copy and start its progression of reducing its community's risk.

In conclusion, based on the items listed throughout the recommendations section of this applied research paper, the CFRD should begin the process of finalizing the work already performed with regard to the self-assessment Criterion 5H- Emergency and Disaster Management. Once this is complete, the additional 15 questions from the 8<sup>th</sup> edition of FESSAM should then be added and completed. Performing these two tasks alone will open the lines of communication with neighboring agencies including Orange County. By looking at what other successful fire agencies are doing, it would also seem

prudent to pursue completing NFPA 1710 and NFPA 1600 to the greatest extent possible. Lastly, once the Vision software is available, it may be of value to incorporate it into our current disaster management process to assist in evaluating our community's fire, rescue, and medical problems as compared to the level of service the CFRD can provide.

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Appendix A

**Carrboro's Emergency and Disaster Management External Survey**

**The intent of this questionnaire is to identify areas of improvement for the Town of Carrboro's Emergency and Disaster Management Plan with regards to reducing its' community's risk. The Commission on Fire Accreditation International's Criterion 5H – Emergency and Disaster Management is a key performance measure in identifying advantages and disadvantages in whether or not the town chooses to pursue accreditation in the near future.**

1. What are your current community risk performance measures and standards that are used when developing the All Hazards plan for your community?

(check all that apply)

NFPA 1710 - Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments.

RHAVE (Risk, Hazard, and Valuation Evaluation)

HAZUS-MH (FEMA's Methodology for Estimating Potential Losses from Disasters)

Stafford Act Program

NFPA 1600 – Standard on Disaster/Emergency Management and Business Continuity

NEMA – National emergency Management Association

EMPG – Emergency Management Performance Grant program

CAR – Capability Assessment Readiness program

NEMB-CAP – National Emergency Management Baseline Capacity Assessment Program

EMAP – Emergency Management Accreditation Program

IEMC – Integrated Emergency Management Course

Homeland Security Preparedness Technical Assistance Program

Homeland Security Exercise and Evaluation Program

National Exercise Program

Models, Simulations, and Games Program

BCP - Business Continuity Planning

SNAP – Special Needs Awareness Program

Other \_\_\_\_\_

2. What did your department learn from the questions found in Criterion

5H-Emergency and Disaster Management section of the accreditation self-assessment manual?

A lot of work was needed to meet minimum standards

Some work was needed to meet minimum standards

A little work was needed to meet minimum standards

All standards were up to date and right on track with minimum standards

Exceeded minimum standards

3. What improvements were implemented from using Criterion 5H-Emergency and

Disaster Management allowing you to work better with other municipal and county agencies during emergencies and disasters? (check all that apply)

Opened lines of communication with many local agencies

Mutual Aid agreements created

Automatic aid agreements created

More communications with county EM

Created / updated a resource list for all to use

Created / updated standard operating procedures

Other \_\_\_\_\_

4. Did your Resource Management practices change after going through the accreditation process?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, in what ways? \_\_\_\_\_

5. Was your city's Emergency and All Hazard plans updated/revamped to ensure continuity of operations?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, what areas? \_\_\_\_\_

6. Is your department also a member of the Emergency Management Accreditation Program?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, why not? \_\_\_\_\_

7. Does your community use an Early Warning Communications System like

CodeRed, ConnectCTY, Dialogics, or another similar system?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, Do you like it? \_\_\_\_\_

8. What types of exercises have you implemented since the accreditation process specifically dealing with Emergency and Disaster Management (Comprehensive Exercise Program)? (check all that apply)

Table top exercises

Functional exercises

Full scale exercises

Mass casualty

Severe Weather

Hazardous Materials

Aircraft Crash

Terrorism

Other \_\_\_\_\_

9. Does your community have a Local Emergency Planning Committee?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, is it utilized? \_\_\_\_\_

10. Do you feel that the Accreditation process has helped to reduce your community's risk?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, in what ways? \_\_\_\_\_

**Please feel free to add any other comments or observations about the questionnaire or other resources that might contribute to the research.**

**Thank you for your time to complete the survey!**

## Appendix B

## Comments from External Survey

1. What are your current community risk performance measures and standards that are used when developing the All Hazards plan for your community?

(check all that apply)

NFPA 1710 - Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments.	100%
RHAVE (Risk, Hazard, and Valuation Evaluation)	20%
HAZUS-MH (FEMA's Methodology for Estimating Potential Losses from Disasters)	0%
Stafford Act Program	0%
NFPA 1600 – Standard on Disaster/Emergency Management and Business Continuity	60%
NEMA – National emergency Management Association	0%
EMPG – Emergency Management Performance Grant program	0%
CAR – Capability Assessment Readiness program	0%
NEMB-CAP – National Emergency Management Baseline Capacity Assessment Program	0%
EMAP – Emergency Management Accreditation Program	0%
IEMC – Integrated Emergency Management Course	0%
Homeland Security Preparedness Technical Assistance Program	20%
Homeland Security Exercise and Evaluation Program	20%

National Exercise Program	0%
Models, Simulations, and Games Program	20%
BCP - Business Continuity Planning	60%
SNAP – Special Needs Awareness Program	20%
Other <u>FireSolv and NetSolv</u>	

2. What did your department learn from the questions found in Criterion 5H-Emergency and Disaster Management section of the accreditation self assessment manual?

A lot of work was needed to meet minimum standards	0%
Some work was needed to meet minimum standards	50%
A little work was needed to meet minimum standards	0%
All standards were up to date and right on track with minimum standards	50%
Exceeded minimum standards	0%

3. What improvements were implemented from using Criterion 5H-Emergency and Disaster Management allowing you to work better with other municipal and county agencies during emergencies and disasters? (check all that apply)

Opened lines of communication with many local agencies	75%
Mutual Aid agreements created	0%
Automatic aid agreements created	0%
More communications with county EM	0%
Created / updated a resource list for all to use	50%
Created / updated standard operating procedures	50%
Other _____	

4. Did your Resource Management practices change after going through the accreditation process?
- Yes 50% No 50% If Yes, in what ways? Identified resources to complete critical tasks
5. Was your city's Emergency and All Hazard plans updated/revamped to ensure continuity of operations?
- Yes 100% No \_\_\_\_\_ If Yes, what areas? New service level objectives and resource deployment
6. Is your department also a member of the Emergency Management Accreditation Program?
- Yes 25% No 75% If No, why not? no comments
7. Does your community use an Early Warning Communications System like CodeRed, ConnectCTY, Dialogics, or another similar system?
- Yes 100% No \_\_\_\_\_ If Yes, Do you like it? \_\_\_\_\_
8. What types of exercises have you implemented since the accreditation process specifically dealing with Emergency and Disaster Management (Comprehensive Exercise Program)? (check all that apply)
- |                      |     |
|----------------------|-----|
| Table top exercises  | 50% |
| Functional exercises | 50% |
| Full scale exercises | 50% |
| Mass casualty        | 25% |
| Severe Weather       | 25% |
| Hazardous Materials  | 75% |



Aircraft Crash	50%
Terrorism	75%
Other _____	0%

9. Does your community have a Local Emergency Planning Committee?

Yes 100% No \_\_\_\_\_ If Yes, is it utilized? \_\_\_\_\_ Yes by all 100%

10. Do you feel that the Accreditation process has helped to reduce your community's risk?

Yes 75% No 25% If Yes, in what ways? accurate descriptions of current potential hazards are identified and recommendations are made for operational tactics, strategies, and policies

## Appendix C

## Accredited Fire Departments in North Carolina

Asheville Fire & Rescue Department	Asheville	28801
Cary Fire Department, Town of	Cary	27513
Charlotte Fire Department	Charlotte	28204
Gastonia Fire Department, City of	Gastonia	28053
Greensboro Fire Department	Greensboro	27401
Jacksonville Fire Department	Jacksonville	28540
Rocky Mount Fire Department	Rocky Mount	27801
Wilson Fire/Rescue Services	Wilson	27894